

REMARKS

The specification has been amended to correct a minor typographical error. Claims 7, 9, and 11 have been amended as suggested by the Examiner, claims 13, 15-19 and 22-23 have been rewritten in independent form, and claims 24-30 have been added to scope the invention. Claims 12, 13, 16 and 19 have been further amended to correct minor informalities, and claims 22 and 23 have been further amended to overcome the Examiner's 112 rejections. No new matter has been entered by any of the foregoing amendments.

Turning to the Examiner's rejection of claims 12, 22 and 23 under 25 USC § 112 as indefinite, claim 12 has been amended to correct a minor informality thereby changing "said third bias current" to "said fourth bias current". Furthermore, claims 22 and 23 have been amended to clarify that once a control signal determines either the third or fourth bias current, the third or fourth bias current is constant. Thus, it is believed that all the Examiner's 112 rejections have been rendered moot.

Turning to the rejection of claims 7-13, 16 and 19 under 35 USC § 102 as anticipated by Hogeboom U.S. Patent 6,194,949, and claims 13-23 under 35 USC § 102 (e) as anticipated by DeClue et al. U.S. Patent 6,281,715 claims 7, 9 and 11 have been amended as suggested by the Examiner. Claims 13, 15-19 and 22-23 have been rewritten in independent form. The patentability of these claims is discussed below.

Regarding claims 13, 16, 19 and 26, according to Hogeboom, the member represented by reference 90 is a bias cell (column 4, line 36), not a control signal as indicated by the Examiner. The outputs of the bias cell 90 are the signal BP and the signal BN as shown in Fig.

2. The signal BP is supplied to the gate of the transistor 70 (Fig. 1) and the signal BN is

supplied to the gate of the transistor 80 (Fig. 1). The transistor 70 and the transistor 80 correspond to the first current source circuit and the second current source circuit of the present invention, respectively. On the other hand, the control signal according to the present invention controls the third current source circuit and the fourth current source circuit. Therefore, the bias cell 90 of Hogeboom has no relation to the control signal according to the present invention, and the signals BP and BN have no relation to the control signal according to the present invention. Hence, the present invention is patentably distinguished from Hogeboom.

Regarding claims 13, 16, 19 and 26, according to DeClue, the control signal supplied to the transistors M25 and M27 is dependent on an input signal. That is, the transistors M25 and M27 are turned on during only a certain period after the input signal changes. On the other hand, according to the present invention, the control signal is independent of an input signal. Therefore, the present invention is patentably distinguished from DeClue.

Regarding claims 9, 10, 16, 17, 18, 24-30, according to DeClue, each push-pull circuit comprises the same conductive types of transistors. On the other hand, according to the present invention, each push-pull circuit comprises at least two conductive types of transistors. Therefore, the present invention is patentably distinguished from DeClue.

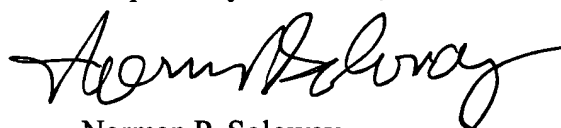
Regarding claim 15, according to Hogeboom, the current I_{dc} which is generated by the transistors 71 and 81 is controlled by the gate voltage of these transistors, and the gate voltage of these transistors is varied by the drain voltages of transistors 70, 71, 80 and 81. Therefore, the current I_{dc} is not a constant current. In addition, according to DeClue, the current ID_2 flows to the transistors M28, M27, M25 and M26 only a certain period after the input signal changes. Therefore, the current ID_2 is not a constant current. On the other hand, according to

the present invention, the second bias current is a constant current. Therefore, the present invention is patentably distinguished from Hogeboom and DeClue. This also applies to claims 22 and 23.

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Respectfully submitted,



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